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Page

1. A compound of structural formula:

$$R^{3}$$
 O Y Z R^{8} R^{8} R^{10} R^{11} R^{12} R^{12}

or a pharmaceutically acceptable salt thereof, wherein:

R² and R³ are independently selected from the group consisting of:

- (1) hydrogen,
- (2) C₁₋₆ alkyl, unsubstituted or substituted with one or more of the substituents selected from:
 - (a) hydroxy,
 - (b) oxo,
 - (c) C₁₋₆ alkoxy,
 - (d) phenyl-C₁₋₃ alkoxy,
 - (e) phenyl,
 - (f) -CN,
 - (g) halo,
 - (h) -NR9R10, wherein R9 and R10 are independently selected from:
 - (i) hydrogen,
 - (ii) C₁₋₆ alkyl,
 - (iii) hydroxy-C₁₋₆ alkyl, and
 - (iv) phenyl,
 - (i) -NR9COR10,
 - (j) $-NR^9CO_2R^{10}$,
 - (k) -CONR9R10,

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- (1) -COR⁹, and
- (m) $-CO_2R^9$;
- (3) C₂₋₆ alkenyl, unsubstituted or substituted with one or more of the substituent(s) selected from:
 - (a) hydroxy,
 - (b) oxo,
 - (c) C₁₋₆ alkoxy,
 - (d) phenyl-C₁₋₃ alkoxy,
 - (e) phenyl,
 - (f) -CN,
 - (g) halo,
 - (h) -CONR9R10,
 - (i) $-COR^9$,
 - (j) $-CO_2R^9$;
- (4) C2-6 alkynyl;
- (5) phenyl, unsubstituted or substituted with one or more of the substituent(s) selected from:
 - (a) hydroxy,
 - (b) C₁₋₆ alkoxy,
 - (c) C₁₋₆ alkyl,
 - (d) C2-5 alkenyl,
 - (e) halo,
 - (f) -CN,
 - (g) -NO₂,
 - (h) -CF3,
 - (i) $-(CH_2)_{m}-NR_{}^{9}R_{}^{10}$, wherein m is 0, 1 or 2,
 - (j) -NR9COR10,
 - (k) $-NR^9CO_2R^{10}$,
 - (l) -CONR⁹R¹⁰,
 - (m) -CO₂NR⁹R¹⁰,
 - (n) -COR⁹, and

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(o) $-CO_2R^9$;

or the groups R² and R³ are joined together to form a carbocyclic ring selected from the group consisting of:

- (a) cyclopentyl,
- (b) cyclohexyl,
- (c) phenyl,

and wherein the carbocyclic ring is unsubstituted or substituted with one or more substituents selected from:

- (i) C₁₋₆alkyl,
- (ii) C₁-6alkoxy,
- (iii) -NR9R10,
- (iv) halo, and
- v) trifluoromethyl;

or the groups R^2 and R^3 are joined together to form a heterocyclic ring selected from the group consisting of:

- (a) pyrrolidinyl,
- (b) piperidinyl,
- (c) pyrrolyl,
- (d) pyridinyl,
- (e) imidazolyl,
- (f) furanyl,
- (g) oxazolyl,
- (h) thienyl, and
- (i) thiazolyl,

and wherein the heterocyclic ring is unsubstituted or substituted with one or more substituent(s) selected from:

- (i) C₁₋₆alkyl,
- (ii) oxo,
- (iii) C₁₋₆alkoxy,
- (iv) -NR9R10,

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- (v) halo, and
- (vi) trifluoromethyl;

R6, R7 and R8 are independently selected from the group consisting of:

- (1) hydrogen;
- (2) C₁₋₆ alkyl, unsubstituted or substituted with one or more of the substituents selected from:
 - (a) hydroxy,
 - (b) oxo,
 - (c) C₁₋₆ alkoxy,
 - (d) phenyl-C₁₋₃ alkoxy,
 - (e) phenyl,
 - (f) -CN,
 - (g) halo,
 - (h) -NR9R10,
 - (i) -NR9COR10,
 - (j) -NR9CO₂R10,
 - (k) -CONR9R10,
 - (l) -COR⁹, and
 - (m) $-CO_2R^9$;
- (3) C₂₋₆ alkenyl, unsubstituted or substituted with one or more of the substituent(s) selected from:
 - (a) hydroxy,
 - (b) oxo,
 - (c) C₁₋₆ alkoxy,
 - (d) phenyl-C₁₋₃ alkoxy,
 - (e) phenyl,
 - (f) -CN,
 - (g) halo,
 - (h) $-CONR^9R^{10}$,
 - (i) -COR⁹, and
 - (j) $-CO_2R^9$;

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- (4) C₂₋₆ alkynyl;
- (5) phenyl, unsubstituted or substituted with one or more of the substituent(s) selected from:
 - (a) hydroxy,
 - (b) C₁₋₆ alkoxy,
 - (c) C₁₋₆ alkyl,
 - (d) C2-5 alkenyl,
 - (e) halo,
 - (f) -CN,
 - (g) -NO₂,
 - (h) -CF3,
 - (i) $-(CH_2)_{m}-NR_{9}R_{10}$,
 - (j) -NR9COR10,
 - (k) $-NR^9CO_2R^{10}$,
 - (l) -CONR9R10,
 - (m) -CO₂NR⁹R¹⁰,
 - (n) -COR⁹, and
 - (o) $-CO_2R^9$;
- (6) halo,
- (7) -CN,
- (8) -CF₃,
- (9) -NO₂,
- (10) -SR14, wherein R14 is hydrogen or C1-5alkyl,
- (11) $-SOR^{14}$,
- (12) -SO₂R₁₄,
- (13) NR9COR10,
- (14) CONR9COR10,
- (15) NR9R10,
- (16) $NR^9CO_2R^{10}$,
- (17) hydroxy,
- (18) C₁-6alkoxy,
- (19) COR^9 ,

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- (20) CO_2R^9 ,
- (21) 2-pyridyl,
- (22) 3-pyridyl,
- (23) 4-pyridyl,
- (24) 5-tetrazolyl,
- (25) 2-oxazolyl, and
- (26) 2-thiazolyl;

R¹¹, R¹² and R¹³ are independently selected from the definitions of R⁶, R⁷ and R⁸, or -OX;

A is selected from the group consisting of:

- (1) C₁₋₆ alkyl, unsubstituted or substituted with one or more of the substituents selected from:
 - (a) hydroxy,
 - (b) oxo,
 - (c) C₁₋₆ alkoxy,
 - (d) phenyl-C₁₋₃ alkoxy,
 - (e) phenyl,
 - (f) -CN,
 - (g) halo, wherein halo is fluoro, chloro, bromo or iodo,
 - (h) -NR9R10,
 - (i) -NR9COR10,
 - (i) $-NR^9CO_2R^{10}$,
 - (k) $-CONR^9R^{10}$,
 - (l) -COR⁹, and
 - (m) $-CO_2R^9$;
- (2) C₂₋₆ alkenyl, unsubstituted or substituted with one or more of the substituent(s) selected from:
 - (a) hydroxy,
 - (b) oxo,

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and only

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- (c) C₁₋₆ alkoxy,
- (d) phenyl-C₁₋₃ alkoxy,
- (e) phenyl,
- (f) -CN,
- (g) halo,
- (h) -CONR⁹R¹⁰,
- (i) -COR⁹, and
- (j) $-CO_2R^9$; and

(3) C₂₋₆ alkynyl;

B is a heterocycle, wherein the heterocycle is selected from the group consisting of:

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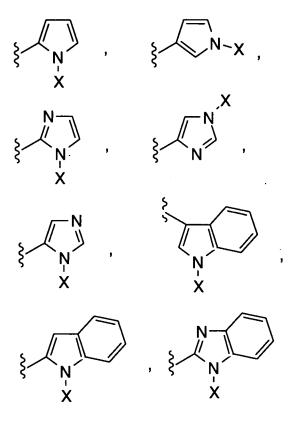
Page 10

 $\begin{cases} N-N \\ N \end{cases}, \qquad \begin{cases} N=N \\ N \end{cases}, X ,$ $\{ \bigvee_{N}^{N} x , \quad \{ \bigvee_{N}^{N} x \} \}$

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and wherein the heterocycle is substituted in addition to -X with one or more substituent(s) selected from:

- (i) hydrogen;
- (ii) C₁₋₆ alkyl, unsubstituted or substituted with halo, -CF₃, -OCH₃, or phenyl,
- (iii) C₁₋₆ alkoxy,
- (iv) oxo,
- (v) hydroxy,
- (vi) thioxo,
- (vii) -SR⁹,
- (viii) halo,
- (ix) cyano,
- (x) phenyl,
- (xi) trifluoromethyl,
- (xii) $-(CH_2)_m$ -NR 9 R 10 ,
- (xiii) -NR9COR10,

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(xiv) -CONR⁹R¹⁰,

(xv) $-CO_2R^9$, and

(xvi) $-(CH_2)_m$ -OR⁹;

p is 0 or 1;

X is selected from:

- (a) -PO(OH)O⁻ M⁺, wherein M⁺ is a pharmaceutically acceptable monovalent counterion,
- (b) $-PO(O^{-})_2 \cdot 2M^+$,
- (c) $-PO(O^{-})_2 \cdot D^{2+}$, wherein D^{2+} is a pharmaceutically acceptable divalent counterion,
- (d) -CH(R⁴)-PO(OH)O⁻ M⁺, wherein R⁴ is hydrogen or C₁₋₃ alkyl,
- (e) $-CH(R^4)-PO(O^{-1})_2 \cdot 2M^+$,
- (f) $-CH(R^4)-PO(O^{-1})_2 \cdot D^{2+}$,
- (g) -SO3- M+,
- (h) $-CH(R^4)-SO_3- M^+$,
- (i) -CO-CH2CH2-CO2- M+,
- (j) -CH(CH3)-O-CO-R⁵, wherein R⁵ is selected from the group consisting of:

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(i) 5²O NH₃+ M -

(ii)
$$\int_{0}^{\xi} O \xrightarrow{H_2^+ M^-} R^9$$
,

(iv)
$$\int_{CO_2^-M^+}^{CO_2^-M^+}$$

(vi)
$$S^{5}$$
 O CO_{2} M⁺
 CO_{2} M⁺

(vii)
$${}^{\zeta}O$$
; and

(k) hydrogen, with the proviso that if p is 0 and none of R¹¹, R¹² or R¹³ are -OX, then X is other than hydrogen;

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Y is selected from the group consisting of:

- (1) a single bond,
- (2) -O-,
- (3) -S-,
- (4) -CO-,
- (5) -CH₂-,
- (6) -CHR¹⁵-, and
- (7) -CR15R16-, wherein R15 and R16 are independently selected from the group consisting of:
 - (a) C₁₋₆ alkyl, unsubstituted or substituted with one or more of the substituents selected from:
 - (i) hydroxy,
 - (ii) oxo,
 - (iii) C₁₋₆ alkoxy,
 - (iv) phenyl-C₁₋₃ alkoxy,
 - (v) phenyl,
 - (vi) -CN,
 - (vii) halo,
 - (viii) -NR9R10,
 - (ix) $-NR^9COR^{10}$,
 - (x) -NR9CO₂R10,
 - (xi) $-CONR^9R^{10}$,
 - (xii) -COR⁹, and
 - (xiii) -CO₂R⁹;
 - (b) phenyl, unsubstituted or substituted with one or more of the substituent(s) selected from:
 - (i) hydroxy,
 - (ii) C₁₋₆ alkoxy,
 - (iii) C₁₋₆ alkyl,
 - (iv) C2-5 alkenyl,
 - (v) halo,
 - (vi) -CN,

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(vii) -NO2,

(viii) -CF3,

(ix) $-(CH_2)_{m}-NR_{9}R_{10}$,

(x) -NR9COR10,

(xi) -NR9CO₂R10,

(xii) -CONR9R10,

(xiii) -CO2NR9R10,

(xiv) -COR9, and

(xv) $-CO_2R^9$;

Z is selected from:

(1) hydrogen,

(2) C₁₋₆ alkyl, and

(3) hydroxy, with the proviso that if Y is -O-, then Z is other than hydroxy, and with the further proviso that if Y is -CHR¹⁵-, then Z and R¹⁵ may be joined together to form a double bond between the two carbon atoms.

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B)=181

The compound of Claim X wherein:

R² and R³ are independently selected from the group consisting of:

- (1) hydrogen,
- (2) C₁₋₆ alkyl,
- (3) C₂₋₆ alkenyl, and
- (4) phenyl;

R6, R7 and R8 are independently selected from the group consisting of:

- (1) hydrogen,
- (2) C₁₋₆ alkyl,
- (3) fluoro,
- (4) chloro,
- (5) bromo,
- (6) iodo, and
- (7) -CF3;

R11, R12 and R13 are independently selected from the group consisting of:

- (1) fluoro,
- (2) chloro,
- (3) bromo, and
- (4) iodo;

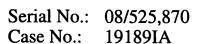
A is unsubstituted C₁₋₆ alkyl;

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B is selected from the group consisting of:

[2600X

$$\{ \begin{array}{c} N-H \\ N-N \\ \end{array}$$



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X N O	₹ N O ,
₹ N X s ,	₹ N S ,
//-N	//-N

p is 0;

X is selected from:

- (a) -PO(OH)O⁻ M⁺, wherein M⁺ is a pharmaceutically acceptable monovalent counterion,
- (b) $-PO(O^{-})_2 \cdot 2M^+$,
- (c) $-PO(O^{-})_2 \cdot D^{2+}$, wherein D^{2+} is a pharmaceutically acceptable divalent counterion,
- (d) -CH(R⁴)-PO(OH)O⁻ M⁺, wherein R⁴ is hydrogen or methyl,
- (e) $-CH(R^4)-PO(O^{-1})_2 \cdot 2M^+$,
- (f) $-CH(R^4)-PO(O^{-1})_2 \cdot D^{2+}$,
- (g) -CO-CH₂CH₂-CO₂-• M⁺,

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(h) -CH(CH₃)-O-CO-R⁵, wherein R⁵ is selected from the group consisting of:

(ii)
$$\int_{0}^{4} \int_{0}^{H_{2}^{+}} M$$
 OH

(iii)
$$\int_{CO_2}^{CO_2} M^+$$

(iv)
$$\int_{CO_2^-M^+}^{CO_2^-M^+}$$

(v)
$${}_{5}^{\xi}$$
 ${}_{0}$ ${}_{NH_{3}^{+}}^{CO_{2}^{-}}$

(vi)
$$\int_{CO_2^-}^{CO_2^-} M^+$$

 $\int_{CO_2^-}^{CO_2^-} M^+$

Y is -O-;

Z is hydrogen or C₁₋₄ alkyl.

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The compound of Claim $\frac{1}{2}$ 1 wherein Z is C₁₋₄ alkyl.

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The compound of Claim 3/1 wherein Z is -CH3.

CH(CH2)

The compound of Claim 3/1 wherein A is -CH2- or

-CH(CH3)-

76. The compound of Claim 11 wherein -B is selected from the group consisting of:

[2630]

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X N S S N X S

 $\{ \sqrt{N} \setminus O X \text{ , and } \{ \sqrt{N} \setminus S X \}$

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The compound of Claim 1 wherein -A-B is selected from the group consisting of:

The compound of Claim 31 wherein X is selected from the group consisting of:

- (a) -PO(O⁻⁾2 2M⁺, wherein M⁺ is a pharmaceutically acceptable monovalent counterion, and
- (b) -PO(O-)₂ D²⁺, wherein D²⁺ is a pharmaceutically acceptable divalent counterion.

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The compound of Claim 3/1 of the structural

formula II:

or a pharmaceutically acceptable salt thereof, wherein R2, R3, R6, R7, R8, R11, R12, R13, A, B and Z are as defined in Claim 1.

The compound of Claim \(\frac{1}{4} \) Lof the structural

formula III:



or a pharmaceutically acceptable salt thereof, wherein R2, R3, R6, R7, R8, R11, R12, R13, A, B, and Z are as defined in Claim L.

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Al. A compound which is selected from the group consisting of:

- (1) 2-(S)-(3,5-bis(trifluoromethyl)benzyloxy)-3-(S)-phenyl-4-(3-(5-oxo-1H,4H-1,2,4-triazolo)methyl)morpholine N-oxide;
- (2) 2-(R)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-3-(S)-(4-fluoro)-phenyl-4-(3-(4-monophosphoryl-5-oxo-1H-1,2,4-triazolo)methyl)morpholine;
- (3) 2-(R)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-3-(S)-(4-fluoro)-phenyl-4-(3-(1-monophosphoryl-5-oxo-1H-1,2,4-triazolo)methyl)morpholine;
- (4) 2-(R)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-3-(S)-(4-fluoro)-phenyl-4-(3-(2-monophosphoryl-5-oxo-1H-1,2,4-triazolo)methyl)morpholine;
- (5) 2-(R)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-3-(S)-(4-fluoro)-phenyl-4-(3-(5-oxyphosphoryl-1H-1,2,4-triazolo)-methyl)morpholine;
- (6) 2-(S)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-3-(S)-(4-fluoro)-phenyl-4-(3-(1-phosphoryl-5-oxo-4H-1,2,4-triazolo)methyl)morpholine;

or a pharmaceutically acceptable salt thereof.

The compound of Claim W wherein the pharmaceutically acceptable salt is the bis(N-methyl-D-glucamine) salt.

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A compound which is selected from the group

consisting of:

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wherein K+ is a pharmaceutically acceptable counterion.

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A compound which is:

2-(R)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-

3-(S)-(4-fluoro)phenyl-4-(3-(1-phosphoryl-5-oxo-

4H-1,2,4-triazolo)methylmorpholine;

or a pharmaceutically acceptable salt thereof.

The compound of Claim 44 wherein the pharmaceutically acceptable salt is the bis(N-methyl-D-glucamine) salt.

46. A compound which is

2-(R)-(1-(R)-(3,5-bis(trifluoromethyl)phenyl)ethoxy)-3-(S)-(4-fluoro)phenyl-4-(3-(1-phosphoryl-5-oxo-4H-1,2,4-triazolo)methylmorpholine, bis(N-methyl-D-glucamine).

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1 / A7 / A compound which is:

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wherein K⁺ is a pharmaceutically acceptable counterion.

48. The compound of Claim 47 wherein K+ is N-methyl-D-glucamine.

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A compound which is:

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A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective amount of the compound of Claim 11!

The pharmaceutical composition of Claim 50 wherein the pharmaceutically acceptable carrier comprises water.

52. The pharmaceutical composition of Claim 50 wherein the pharmaceutically acceptable carrier comprises a physiologically acceptable saline solution.

A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective amount of a compound which is:

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With

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A method for antagonizing the effect of substance P at its receptor site or for the blockade of neurokinin-1 receptors in a mammal which comprises the administration to the mammal of the compound of Claim 31 in an amount that is effective for antagonizing the effect of substance P at its receptor site or for the blockade of neurokinin-1 receptors in the mammal.

A method of treating or preventing pain or nociception which comprises the administration to the mammmal of an effective amount of the compound of Claim 1.

56.—A method of treating or preventing a condition selected from the group consisting of: diabetic neuropathy; peripheral neuropathy; AIDS related neuropathy; chemotherapy-induced neuropathy; and neuralgia, in a mammal in need thereof which comprises the administration to the mammal of an effective amount of the compound of Claim 31.

- 57. A method for the treatment or prevention of asthma in a mammal in need thereof which comprises the administration to the mammal of an effective amount of the compound of Claim 31, either alone or in combination with a neurokinin-2 receptor antagonist or with a β2-adrenergic receptor agonist.
- 58. A method for the treatment of cystic fibrosis in a mammal in need thereof which comprises the administration to the mammal of an effective amount of the compound of Claim 31.
- 59. A method for the treatment or prevention of arthritis in a mammal in need thereof which comprises the administration to the mammal of an effective amount of the compound of Claim 31.

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